

REMARKS

This Amendment is responsive to the non-final Office Action mailed June 21, 2007. At the time of the Office Action, claims 37-51 and 53-65 were presented for examination, with claim 37 of independent format. Claim 52 is withdrawn.

No claims are amended herein. The claim listing is provided as a courtesy.

35 U.S.C. §102 Rejection

Claims 37-51 and 53-62 stand rejected under 35 U.S.C. §102(b) as being anticipated by Eggers et al., U.S. Patent No. 6,032,674. In raising the rejection, the Examiner presents the following:

Eggers et al. disclose a probe that includes an end-effector (i.e. distal end) that may simultaneously provide RF energy via one or more electrodes (27) and fluid (2783 to tissue (see Figure 18). Eggers et al also disclose a dimensional change sensor (310) which is an ultrasound sensor that detects a change in the thickness of tissue as it is being ablated. The sensor is used to control the output of RF energy and alerts the user of changing tissue thickness to prevent creating too deep a channel in tissue (col. 23, lines 50-63). The examiner maintains the device is inherently a “shrinkage sensor” since the channel created by the device is creating a shrinking tissue area (i.e. channel) that is being detected by the sensor, and the sensor provides feedback regarding the shrinking of the tissue (i.e. the depth of the channel).

Eggers et al. disclose various arrangements for the electrodes, and the device may be operated in either a monopolar or a bipolar manner. Eggers et al also provide for multiple fluid lumens (figure 2a).

Applicant respectfully disagrees with the rejection of claims 37-51 and 53-62 as being anticipated by Eggers et al., U.S. Patent No. 6,032,674.

The ultrasonic transducer of Eggers et al. determines the thickness of the heart wall by measuring the delay time for reflected ultrasound signal to return from the boundary of the heart wall at the surface of epicardium. The delay time is then translated into a thickness of the heart wall. (Col. 23, l. 19-28). Thus, Eggers et al. does not teach a dimensional change sensor.

Eggers et al. merely teaches a sensor which measures a delay time for reflected ultrasound signal to return from the reflected surface, which is then translated to a dimensional change. There is no teaching or suggestion of having a feature that measures the dimensional change of the tissue.

Moreover, the Examiner's interpretation of the teachings of Eggers et al. is incorrect. The Examiner maintains that the channel created by Eggers et al. is a "shrinkage tissue area", and that the ultrasonic sensor provides feedback regarding the depth of that channel. However, as indicated above, the ultrasonic transducer of Eggers et al. measures the delay time for reflected ultrasound signal to travel through tissue. Eggers et al. does not measure the empty space of the channel, even if the channel created in the absence of ablated tissue could somehow be considered as a "shrinkage tissue area" as provided by the Examiner.

At least in view of the foregoing remarks, it is respectfully submitted that claims 37-51 and 53-62 are not anticipated by Eggers et al., the conditions of patentability have been satisfied and the rejection of claims 37-51 and 53-62 should be withdrawn upon reconsideration.

35 U.S.C. §103 Rejection

Claims 63-65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bommannan et al., U.S. Patent No. 6,775,575, in view of Mulier et al., U.S. Patent No. 6,096,037. In raising the rejection, the Examiner presents the following:

The Bommannan et al device comprises an end effector (i.e. forceps jaw) that includes electrodes for treating tissue (see Abstract). Bommannan et al further disclose providing the jaws with sensors (250) for sensing the dimensional change of tissue (e.g. tissue thickness) and controlling the delivery of energy (see col. 5, line 64 through col. 6, line 34). The only feature not expressly taught by Bommannan et al is the provision of a fluid outlet to provide fluid during treatment.

Mulier et al disclose an analogous device for clamping and treating electrodes, and specifically teach that providing an electrolytic solution from fluid outlets in the jaws will enhance the delivery of energy to tissue.

To have provided the Bommannan et al device with a fluid source and fluid outlet to provide fluid to tissue to enhance the delivery of RF energy to tissue

would have been an obvious modification for one of ordinary skill in the art in view of the teaching of Mulier et al.

Applicant respectfully disagrees with the Examiner's rejection of claims 63-65 as being unpatentable over Bommannan et al., U.S. Patent No. 6,775,575, in view of Mulier et al., U.S. Patent No. 6,096,037.

Bommannan et al. teach that tissue properties may be monitored by conventional sensors, including tissue properties such as tissue dimension (e.g., length or thickness), and that sensors used may include thermistors, thermocouples, optical sensors and the like. However, nothing in Bommannan et al. teaches or suggests a sensor as claimed by the Applicant. Furthermore, neither Eggers et al nor Mulier et al. provides the teachings missing from the primary reference Bommannan et al. to maintain the rejection.

Regardless of the teachings of Bommannan et al., Applicant notes that the February 26, 2001 priority date of Bommannan et al. is less than about two weeks prior to the Applicant's priority date of March 8, 2001. If the rejection is maintained, Applicant will submit an affidavit under 37 C.F.R. §1.131(a) stating that the subject matter of the claimed invention was conceived and was the subject of a patent application being diligently prepared prior to Bommannan et al.'s priority date of February 26, 2001.

In view of the foregoing remarks, it is respectfully submitted that claims 63-65 are not unpatentable over Bommannan et al., in view of Mulier et al., the conditions of patentability have been satisfied and the rejection of claims 63-65 should be withdrawn upon reconsideration.

Double Patenting

Claims 37-51 and 53-65 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-68 of U.S. Patent No. 6,689,131.

Applicant respectfully traverses the nonstatutory obviousness-type double patenting rejection. However, solely to expedite prosecution, Applicant submits the requested Terminal Disclaimer along with the appropriate fees. Withdrawal of the rejection is respectfully requested.

Summary

The Applicant respectfully submits that, in light of the foregoing amendments and remarks, and having dealt with all the rejections raised by the Examiner, the claims are in order for allowance. A Notice of Allowance is respectfully requested.

The Examiner is invited to contact the undersigned representative if it will facilitate prosecution of this application.

Respectfully Submitted,

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